WHAT IS CLAIMED IS:

1. A myocardial graft in an animal, comprising:

a stable graft of skeletal myoblasts or cardiomyocytes incorporated in myocardial tissue of said animal.

2. The myocardial graft of claim 1 wherein said stable graft comprises cardiomyocytes.

3. The myocardial graft of claim 1 wherein said stable graft comprises skeletal myoblasts.

4. The myocardial graft of claim 1 which is non-tumorogenic.

5. The myocardial graft of claim 1 wherein said stable graft delivers recombinant molecules to the myocardial tissue.

6. The myocardial graft of claim 5 which is non-tumorogenic.

7. A method for forming a stable myocardial graft in an animal, comprising:

introducing skeletal myoblasts or cardiomyocytes in myocardial tissue of the animal so as to form a stable myocardial graft.

8. The method of claim 7 wherein said introducing comprises injecting the skeletal myoblasts or cardiomyocytes into myocardial tissue of the animal.

9. The method of claim 7 in which skeletal myoblasts are introduced into the myocardial tissue.

10. The method of claim 7 in which cardiomyocytes are introduced into the myocardial tissue.

11. The method of claim 7 wherein the myocardial graft is non-tumorogenic.

12. The method of claim 11 wherein the myocardial graft delivers recombinant molecules to the myocardial tissue.

13. A method for delivering recombinant molecules to myocardial tissue of an animal, comprising:

establishing a stable graft of skeletal myoblasts or cardiomyocytes incorporated in myocardial tissue of the animal, wherein the myoblasts or cardiomyocytes deliver recombinant molecules to the myocardial tissue.

14. The method of claim 13 wherein the stable graft comprises skeletal myoblasts.

15. The method of claim 13 wherein the stable graft comprises cardiomyocytes.

16. The method of claim 13 wherein the graft is non-tumorogenic.

17. A cellular composition comprising a substantially homogeneous population of non-immortalized cardiomyocytes.

18. A method of obtaining a substantially homogeneous population of cells, comprising:

transfecting embryonic stem cells to introduce a marker gene enabling selection of one cell lineage from other cell lineages resulting from the differentiation of the stem cells;

causing the stem cells to differentiate; and

selecting said one cell lineage based on said marker gene.

19. The method of claim 18, comprising:

transfecting the stem cells to introduce (i) a first marker gene enabling selection of transfected stem cells from non-transfected stem cells and (ii) a second marker gene enabling selection of said one cell lineage from said other cell lineages;

selecting transfected stem cells based on the first marker gene;

causing the selected stem cells to differentiate; and

selecting said one cell lineage based on said marker gene.

20. The method of claim 19 wherein said one cell lineage is cardiomyocytes.

21. A non-human animal having a stable graft of skeletal myoblasts or cardiomyocytes incorporated in myocardial tissue of the animal.

22. The animal of claim 21 which is a mammal.

23. The animal of claim 22 wherein the graft is non-tumorogenic.

24. The animal of claim 23 wherein the graft includes cardiomyocytes.

25. The animal of claim 23 wherein the graft includes skeletal myoblasts.

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